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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/692,580 | 10/24/2003 | Boris S. Jacobson | RTN-183AUS | 9035 |
| 22494 | 7590 | 03/13/2006 | EXAMINER | |
| DALY, CROWLEY, MOFFORD & DURKEE, LLP SUITE 301A 354A TURNPIKE STREET CANTON, MA 02021-2714 | | | CAVALLARI, DANIEL J | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2836 | |

DATE MAILED: 03/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---------------------|-----------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/692,580 | JACOBSON ET AL. | |
| | Examiner | Art Unit | |
| | Daniel J. Cavallari | 2836 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/19/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 4/19/2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

The drawings are objected to because they are illegible.

Figures 2-7A, 8, 11A, 12A, & 13A appear to be a photocopy. Regardless, they are illegible because of the black spheres that overtake the various component connections as well as various reference numbers making the systems incomprehensible.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

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of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The specification is objected to for the following reasons:

- It is unclear what the references (Po, Ro, So & Eo) (See Specification, Page 4) are referring to. The reference number given to each component is sufficient to identify the device if it is being used as an identifier. These additional references next to the components are confusing and need clarification. The specification should be checked for other such references (i.e Page 5) in which "PR" is present next to the "regulated power sources 127" and "D" loads.
- The same reference number (110) is used to reference two different components. Reference number 110 is first disclosed as "The common power source 110" and then referred to as "A power source 110". If the reference number is meant to reference the same part, it should be given the same name. Furthermore, it is unclear how reference 110 could be "realized as a battery, a generator, a fuel cell, a solar cell or the like" as reference number 110 (See

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Figure 3) is in reference to the entire power system and not a single component

(See Figure 3 & Specification, Page 4).

Appropriate action is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6, 14, 24, & 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6, 14, 24, & 31 recite the limitation "said energy storage unit" however "a energy storage unit" is not previously disclosed. There is insufficient antecedent basis for this limitation in the claim. Because of the 112 problems with claims 6, 14, 24, & 31, no art can be applied.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 7, 8, 15, 16, 17, 18, & 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siewert et al. (US 5,892,299), Hart (US 6,236,949), and Cole et al. (US 2,135,250) .

Siewert et al. (hereinafter referred to as Siewert) teaches

- A power source unregulated bus, read on by SPSS power bus (1210) (See Figure 12)
- A power source regulated bus, read on by bus 1220 (See Figure 11) as regulated by regulator (400) (See Figure 12 & Column 11, Lines 23-58)
- At least one power source (200) having an output to converter (330) (See Figure 12)
- A first group comprising a switch (260) of component (230) coupling the power source (200) to the unregulated bus (See Figure 2 and Column 4, Line 52 to Column 5, Line 21)
- At least one regulator, read on by regulator power conditioner (400) (See Figure 12) having an input from bus (1210) and an output to the regulated bus (1020).
An embodiment of the power conditioner (400) taught incorporating a regulator (440) (See Figure 4 & Column 7, Lines 26-35).
- A second group comprising a switch (500) coupling an input of the regulator (400)
- At least one power system subsystem component, read on by the branch N and subgroups 1-J & M-K (See Figure 12 & Column 10, Line 27-46 & Column 11,

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Lines 23-34) in which all of the subsystem components are present that are present in the main system.

Siewert fails to teach:

- A second group comprising a switch located between the regulator input and the unregulated bus and a third group comprising a switch located between the regulator output and the regulated bus.
- A controller coupled with the first, second, and third group of switches as well as coupled to a sensor.

Siewert discloses a switch (500) located between a power conditioner and the power bus (1210), the power bus connected to the power conditioner (400) (Regulator) and a second switch (500) coupled to the power conditioner (400) via the bus (1220).

Siewert fails to teach switches coupled to the input and output of the regulator, thereby coupling the input and the output do to the unregulated bus (1210) and the regulated bus (1220).

Cole et al. (hereinafter referred to as Cole) teach a power supply system in which a regulator (27) is connected to an unregulated bus (20) via switch (23) and a regulated bus (22) through a second switch (28) (See Figure 1 & Page 3, Lines 34-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate switches between the regulator taught by Siewert between the regulator input and the unregulated bus and the regulator output and the

regulated bus, as taught by Cole. The motivation would have been to provide a means to service the regulator (See Cole, Page 1, Lines 33-41).

Siewert teaches switches (i.e. 260) that can operate "automatically" (See column 5, Lines 8-21) as well as the isolation device (530) operating by a control means (See Column 8, Lines 3-18). Siewert further teaches sensors read on by feedback provided by the PEE DC bus used to control the power conditioners (400) (See Column 10, Lines 47-67) as well as a controller (1240) in which the sensors are connected via electrical lines (1215, 1225, 1205) (See Column 11, Lines 35-58).

Siewert fails to teach the controller coupled with the first, second, and third group of switches. Hart teaches switches, read on by the circuit breakers (44-47) all electrically connected via bus 7 to a controller, read on by a remote computer (See Figure 1 & Column 6, Line 26 to Column 7, Line 26 & Column 7 Lines 50-63).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a connection between the controller, taught by Siewert, as well as the switches, also taught by Siewert, in the common fashion as taught by Hart in which a controller is attached to all the switches. The motivation would have been to provide an automated means of operating the switches in which Siewert is silent (See Siewert, Column 5, Lines 8-21)

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Siewert further teaches:

In regard to Claims 2, 5, 9, 13, 20, 23, 26, & 30

- A stabilizer, read on by the source converter (300) (See Figure 12) which comprises a switch (328) and a DC/DC converter (326) as illustrated in component (324) (See Figure 3B & Column 6, Lines 53-64) and having an input coupled to a power source (200) and an output with a forth group comprising of a switch (328) (See Figure 3B) coupling the stabilizer to the unregulated bus (1210) (See Figure 12).

In regard to Claims 3, 10, 21, & 27

- The power system further comprising at least one storage element, as shown in Figure 3A, component (380), labeled "internal DC" which is described in the specification as comprising a battery (See Column 4, Line 62 to Column 5, line 7) and the source converter (300) being coupled (including storage element) being coupled to the regulator (400) (See Figure 12) wherein the storage element is coupled to the regulated bus via a forth group comprising a switch (385).

In regard to Claims 4, 12, 22, & 29

- The power source (200) comprising a battery (See Figure 2, component 220 & Column 4, Line 62 to Column 5, line 7)

In regard to Claims 11 & 28

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- A load, read on by the protected electrical equipment (PEE) (See Figure 12 & Column 3, lines 46-61) and a fifth group comprising at least one switch (500), as shown located between the load (110) and the regulated bus (1220) (See Figure 12)

In regard to Claim 32

- At least one mode in which a single power source (1) (200) or another mode in which multiple power sources (N) are used to supply to the power system (See Column 10, lines 8-26).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Horvath et al. (US 6,496,342)
- Velez (US 5,784,237)
- Andarawis et al. (US 6,999,291)
- Young et al. (US 2003/0025397)
- Lampe et al. (US 6,194,794)
- Siewert et al. (US 6,104,103)
- Van Sickle et al. (US 5,811,960)


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Cavallari whose telephone number is (571)272-8541. The examiner can normally be reached on Monday-Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571)272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel Cavallari

March 2, 2006



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